Claims

What is claimed is:

1. Storage and retrieval unit comprising:

a) a supporting carriage which is movable along a rack aisle on at least one substantially horizontal supporting rail by means of a drive;

b) a lifting platform carried along by the supporting carriage and intended for receiving at least one storage item the lifting platform having a plurality of sides;

c) a lifting apparatus by means of which the lifting platform is movable in the vertical direction relative to the supporting carriage, and which comprises at least two traction means, on which the lifting platform is suspended from the supporting carriage;

d) a stabilising device which prevents lateral deflection of the lifting platform and comprises:

da) at least three traction means fastened to the sides of the lifting platform which are opposite in the direction of travel, at least two of the traction means running to at least two fastening points arranged in a region of one end of the rack aisle, and at least one of the traction means running to a fastening point arranged in a region of the other end of the rack aisle;

db) for each of the traction means a drive, through the actuation of which the effective length of

the traction means between the lifting platform and the respective fastening point can be changed;

dc) a control system which controls the drives in such a way that the traction means are taut in each desired position of the lifting platform.

2. Storage and retrieval unit according to Claim 1, wherein the drives are arranged in pairs at the opposite ends of the rack aisle and thus form the fastening points at these locations.

3. Storage and retrieval unit according to Claim 1, wherein the drives are arranged on the lifting platform.

4. Storage and retrieval unit according to claim 1, wherein the drives comprise drums onto which flexible traction means can be wound up.

5. Storage and retrieval unit according to Claim 4, wherein those of the drums which are arranged on a same side of the lifting platform are driven by a common drive shaft.